

اشتقاق الدالة المثلثية $\text{Cosec } x$

$$\text{Cosec } x = \frac{1}{\text{Sin } x}$$

$$\tan x = \frac{\text{Cos } x}{\text{Sin } x}$$

$$f(x) = \text{Cosec } x$$

$$f(x) = \frac{1}{\text{Sin } x}$$

$$f'(x) = \frac{\text{sin } x \cdot 0 - 1 \cdot \text{Cos } x}{\text{Sin}^2 x}$$

$$f'(x) = \frac{-\text{Cos } x}{\text{Sin}^2 x}$$

$$f'(x) = \frac{\text{Cos } x}{\text{Sin } x} \cdot \frac{-1}{\text{Sin } x}$$

$$f'(x) = -\text{Cot } x \cdot \text{Cosec } x.$$

$$\frac{d}{dx}(\text{Cosec } x) = -\text{Cot } x \cdot \text{Cosec } x$$